## ANNALS OF THE NEW YORK ACADEMY OF SCIENCES

VOLUME 410

July 29, 1983

## FIFTH INTERNATIONAL CONFERENCE ON COLLECTIVE PHENOMENA

Editor

JOEL L. LEBOWITZ

## CONTENTS

X
1
3
9
7
3
3
1
15
33
1
9
)7
21
29
33
37
19
3 3 3

On the Phenomenon of the Worsening of the Quality of Some Statistical Procedures on Samples of Increasing Size with Missing Values. By VIKTOR BRAILOVSKY
On Deductive Relational Databases. By JACK MINKER
A Transformation of Economic Iterative Aggregation Processes into Provably Convergent Processes. By L. M. DUDKIN AND V. A. KASPARSON
The Multiple Criteria Decision-Making Process: Using the Methods of Multivariate Statistical Analysis. By DAVID SOLOVEYCHIK
A Method for Solving the Multiple-Objective Linear Programming Problem.  By David Soloveychik
Analyzing and Synthesizing Production Systems by Simulative Modeling. By DMITRI I. GOLYENKO
Concerning the Synthesis of Optimal Planning Models in Multilevel Production Systems: Part I. By DMITRI I. GOLYENKO
Concerning the Synthesis of Optimal Planning Models in Multilevel Production Systems: Part II. By DMITRI I. GOLYENKO
Planning and Control by Means of Alternative Stochastic Network Models: Part 1. By DMITRI 1. GOLYENKO
Planning and Control by Means of Alternative Stochastic Network Models: Part II. By DMITRI I. GOLYENKO
Optimum Design of Concrete Shells. By M. I. REITMAN
Multiextremal Optimization Problems. By M. I. REITMAN
Self-Duality and the Logarithmic Gas in Three Dimensions. By LAURENCE JACOBS AND ROBERT SAVIT
An Experimental Test for Modes of Explicit Chiral Symmetry Breaking in Strong Interactions. By EUGENE M. CHUDNOVSKY
Latest Developments in the Area of Photon-Photon Collisions. By PAUL KESSLER
Korteweg-de Vries and All That. By L. A. DICKEY
Perturbative Solution of Rossler's Equations for Chaotic Motion. By M. NAUENBERG
Thermal and Shot Noise Effects on Nonlinear Oscillators. By E. Ben-Jacob, D. J. Bergman, B. J. Matkowsky, and Z. Schuss
Finite Size Scaling: Part II. By E. Brézin
One-Dimensional Models of Anisotropic Fluids. By JOEL L. LEBOWITZ AND JEROME K. PERCUS
Errata
Index of Contributors

